

7-4 Skills Practice***Solving Logarithmic Equations and Inequalities***

Solve each equation.

1. $3x = \log_6 216$

1

2. $x - 4 = \log_3 243$

9

3. $\log_4 (4x - 20) = 5$

261

4. $\log_9 (3 - x) = \log_9 (5x - 15)$

no solution

5. $\log_{81} (x + 20) = \log_{81} (6x)$

4

6. $\log_9 (3x^2) = \log_9 (2x + 1)$

 $-\frac{1}{3}$ or 1

7. $\log_4 (x - 1) = \log_4 (12)$

13

8. $\log_7 (5 - x) = \log_7 (5)$

0

9. $\log_x (5x) = 2$

5